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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
GRAHAM, CLEMENT B	

ART UNIT	PAPER NUMBER
3628	

DATE MAILED: 04/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/911,839	KAY ET AL.	
	Examiner	Art Unit	
	Clement B Graham	3628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 July 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *6* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

CLAIM OBJECTIONS

1. Claims 2 and 5 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. A proper dependent claim shall not conceivably be infringed by anything which would not also infringe the base claim. See MPEP 608.01(n), Section III. However, the pending claims 2 and 5 recite "An article comprising a computer-readable medium having ... for executing the method of claim 1" and "An article comprising a computer-readable medium having ... for executing the method of claim 1." Applying the infringement test, what is needed to infringe claims 2 and 5 is, for example, a CD-ROM having computer executable code that if and when executed would cause a computer to do the calculating, ranking, and selecting steps. However, such a CD-ROM would **not** infringe the method steps of claim 1 or 3 since the CD-ROM itself never performs any of the active steps of parsing, determining, and billing required by the method. In other words, mere possession of such a CD-ROM would infringe claims 2 and 5, but this is not enough to infringe claims 1 and 3. As a result, claims 2 and 5 are an improper dependent claims.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1, 3-4, 6-7, are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in a two prong test of:

(1) whether the invention is within the technological arts; and

(2) whether the invention produces a useful, concrete and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use or advance the technological arts fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as

opposed to social sciences, for example) are found to be non-statutory subject matter. For a process claim to pass muster, the recited process must somehow apply, involve, use, or advance the technological arts. In the present case, claims 1, 3-4, 6-7 do not recite any structure or functionality to suggest that a computer performs the recited claims. Thus, claims 1, 3-4, 6-7 are rejected as being directed to non-statutory subject matter.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-2, 6, are rejected under 35 U.S.C. 103(a) as being unpatentable over Getchius et al (Hereinafter Getchius U. S. Patent No 6,643, 640) in view of Wagstaff et al (Hereinafter Wagstaff (U.S. Patent No 6,360,213).

As per claims 1-2, Getchius disclose an information retrieval application, a method for detecting content holes, comprising:
parsing a content body into a plurality of concept nodes.(see column 4 lines 40-65) including a first.("i. e, first node" see column 1 line 60-65") concept node. (see column 1 line 60-65) and determining a percentage of successful.("i. e, corresponding data sets "See column 26 lines 5-15) and service interactions as a function of concept node. (See column 25 lines 55-65 and column 26 lines 5-15).
Getchius fails to explicitly teach if the percentage of successful service interactions at the first concept node is below a predefined threshold, flagging a content hole.
However Wagstaff discloses the system typically involves determining whether the percentage of records in a data set having the key falls above or below a predefined threshold. (Note Fig. 7) and a particular key may be characterized according to the percentage of the records in a data set that have the key (the selectivity), and at a very low percentage, the value associated with that key is represented as an uncompressed

row-ID list, and at some percentage indicated by reference, the value associated with the key is optimally represented as a compressed row-ID list. In fact, for all percentages between threshold and the second threshold, the value is optimally represented as a compressed row-ID list. At percentages higher than, however, the optimal representation is a bitmap and determining how to represent the value of the hybrid index entry comprises determining whether the selectivity of the key of the record that is being inserted, deleted, or updated is above a predefined threshold, wherein when the key is found to be above the predefined threshold, the value of the hybrid index entry is represented as a bitmap and determining how to represent the value of the hybrid index entry comprises determining whether the selectivity of the key of the record that is being inserted, deleted, or updated is below a predefined threshold, wherein when it is found that the key is below the predefined threshold, the value of the hybrid index entry is represented as a list of row-IDs.(see column 12 lines 45-60 and column 5 line 10 and column 13-14 lines 5-65).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Getchius to include if the percentage of successful service interactions at the first concept node is below a predefined threshold, flagging a content hole taught by Wagstaff in order to detect and identify data that falls below a certain level.

As per claim 6, Getchius discloses an information retrieval application, a method for detecting content holes, comprising:

parsing a content body into a plurality of concept nodes, including a first concept node. (b) determining a percentage of successful service interactions (SSIs). ("i. e, corresponding data sets "See column 26 lines 5-15) as a function of the concept nodes.(see column 4 lines 40-65) (c) determining a percentage of queries.(see column 26 lines 5-10) as a function of the concept nodes.(see column 4 lines 40-65)

Getchius fails to teach determining a percentage of documents as a function of concept node, and computing a content hole score for the first concept node as a function of at least one of (b), (c), and (d); and (f) flagging a content hole if the content hole is below a predefined threshold.

However Wagstaff discloses the system typically involves determining whether the percentage of records in a data set having the key falls above or below a predefined threshold. (Note Fig. 7) and a particular key may be characterized according to the percentage of the records in a data set that have the key (the selectivity), and at a very low percentage, the value associated with that key is represented as an uncompressed row-ID list, and at some percentage indicated by reference, the value associated with the key is optimally represented as a compressed row-ID list. In fact, for all percentages between threshold and the second threshold, the value is optimally represented as a compressed row-ID list. At percentages higher than, however, the optimal representation is a bitmap and determining how to represent the value of the hybrid index entry comprises determining whether the selectivity of the key of the record that is being inserted, deleted, or updated is above a predefined threshold, wherein when the key is found to be above the predefined threshold, the value of the hybrid index entry is represented as a bitmap and determining how to represent the value of the hybrid index entry comprises determining whether the selectivity of the key of the record that is being inserted, deleted, or updated is below a predefined threshold, wherein when it is found that the key is below the predefined threshold, the value of the hybrid index entry is represented as a list of row-IDs.(see column 12 lines 45-60 and column 5 line 10 and column 13-14 lines 5-65).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Getchius to include determining a percentage of documents as a function of concept node, and computing a content hole score for the first concept node as a function of at least one of (b), (c), and (d); and (f) flagging a content hole if the content hole is below a predefined threshold taught by Wagstaff in order to detect and identify data that falls below a certain level.

5. Claims 3, 4-5, 7, are rejected under 35 U.S.C. 103(a) as being unpatentable over Getchius et al (Hereinafter Getchius U. S. Patent No 6,643, 640) in view of Papierniak et al(Hereinafter Papierniak (U.S. Patent No 6,151, 584).

As per claim 3, 5, Getchius discloses in a defined information retrieval system, a method of charging for services, comprising:

determining a percentage of successful service interactions.("i. e, corresponding datasets") in a typical information retrieval system. (See column 25 lines 55-65 and column 26 lines 5-15).
and determining a percentage of successful service interactions.("i. e, corresponding data sets "See column 26 lines 5-15) for services provided in the defined information retrieval system. (See column 25 lines 55-65 and column 26 lines 5-15).
Getchius fails to teach billing as a function of the difference between the percentage of successful service interactions in a typical information retrieval system and the percentage of successful service interactions for services provided in the defined information retrieval system.
However Papierniak discloses a method of collecting subscriber specified information or supporting retrieval information to analyzing Internet and/or electronic commerce data over or from the World Wide Web for service providers, wherein the business data includes at least one of pre-paid subscriber data, how the subscriber purchases services and products, subscriber discounts, billing rates, subscriber free subscriptions, and information. (see column 24 lines 35-40) and The data received via the questionnaire or on-line forms is then parsed, manually or automatically, into environmental characterization/related data described above, and business related data. Examples of business related data include, e.g., pre-paid user, how user purchases services and products, discounts, billing rates, free subscriptions, free areas/information on web page. (see column 21 lines 30-35).
Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Getchius to include teach billing as a function of the difference between the percentage of successful service interactions in a typical information retrieval system and the percentage of successful service interactions for services provided in the defined information retrieval system taught by Papierniak in order to bill for services provided in the defined information retrieval system.

As per claim 4, Getchius discloses, wherein determining a percentage of successful service interactions for services provided in the defined information retrieval system includes:
parsing a content body into a plurality of concept nodes.(see column 4 lines 40-65) including a first concept node.("i. e, first node" see column 1 line 60-65")
determining a percentage of successful service interactions.("i. e, corresponding data sets ") as a function of each concept node. (See column 25 lines 55-65 and column 26 lines 5-15).
Getchius fails to teach wherein billing as a function of the difference between the percentage of successful service interactions in a typical information retrieval system and the percentage of successful service interactions for services provided in the defined information retrieval system includes weighting successful interactions as a function of concept node.
However Papierniak discloses a method of collecting subscriber specified information or supporting retrieval information to analyzing Internet and/or electronic commerce data over or from the World Wide Web for service providers, wherein the business data includes at least one of pre-paid subscriber data, how the subscriber purchases services and products, subscriber discounts, billing rates, subscriber free subscriptions, and information. (see column 24 lines 35-40) and the data received via the questionnaire or on-line forms is then parsed, manually or automatically, into environmental characterization/related data described above, and business related data. Examples of business related data include, e.g., pre-paid user, how user purchases services and products, discounts, billing rates, free subscriptions, free areas/information on web page. (see column 21 lines 30-35).
Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Getchius to include billing as a function of the difference between the percentage of successful service interactions in a typical information retrieval system and the percentage of successful service interactions for services provided in the defined information retrieval system includes weighting

successful interactions as a function of concept node taught by Papierniak in order to bill customers or users for services provided.

As per claim 7, Getchius discloses in a defined information retrieval system, a method of charging for services, comprising:
determining a number of successful service interactions a typical information retrieval system over a period of time. (See column 25 lines 55-65 and column 26 lines 5-15).
Getchius fails to teach in and billing as a function of the number of successful service interactions in a typical information retrieval system over a period of time.
However Papierniak discloses a method of collecting subscriber specified information or supporting retrieval information to analyzing Internet and/or electronic commerce data over or from the World Wide Web for service providers, wherein the business data includes at least one of pre-paid subscriber data, how the subscriber purchases services and products, subscriber discounts, billing rates, subscriber free subscriptions, and information. (see column 24 lines 35-40) and the data received via the questionnaire or on-line forms is then parsed, manually or automatically, into environmental characterization/related data described above, and business related data. Examples of business related data include, e.g., pre-paid user, how user purchases services and products, discounts, billing rates, free subscriptions, free areas/information on web page. (see column 21 lines 30-35).
Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Getchius to include billing as a function of the number of successful service interactions in a typical information retrieval system over a period of time taught by Papierniak in order to bill customers or users for services provided.

Conclusion

6. The prior art of record and not relied upon is considered pertinent to Applicants disclosure.

Reauvois (US 6, 556, 671) teaches fuzzy logic routing system for call routing within communication centers and in other telephony environments.

.Balasubramaniam et al (US Patent 6, 359, 633) teaches apparatus and method for abstracting markup language.

(US Patent 5,412, 804) teaches extending the semantics of the outer join operator for un-nesting queries to a data base.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clement B Graham whose telephone number is 703-305-1874. The examiner can normally be reached on 7am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung S. Sough can be reached on 703-308-0505. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-0040 for regular communications and 703-305-0040 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

CG

April 4, 2004

HYUNG SOUGH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600